

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
6 April 2006 (06.04.2006)

PCT

(10) International Publication Number
WO 2006/036000 A1

(51) International Patent Classification:

H01L 21/3205 (2006.01) *H01L 23/52* (2006.01)
H01L 21/768 (2006.01) *H01L 23/522* (2006.01)
H01L 21/822 (2006.01) *H01L 27/04* (2006.01)
H01L 21/8234 (2006.01) *H01L 27/06* (2006.01)

(21) International Application Number:

PCT/JP2005/018396

(22) International Filing Date:

28 September 2005 (28.09.2005)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2004-289182 30 September 2004 (30.09.2004) JP

(71) Applicant (for all designated States except US): **RICOH COMPANY, LTD.** [JP/JP]; 3-6, Nakamagome 1-chome, Ohta-ku, Tokyo, 1438555 (JP).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **DAININ, Masanori** [JP/JP]; 36-2, Keyakidai 4-chome, Sanda-shi, Hyogo, 6691321 (JP).

(74) Agent: **ITO, Tadahiko**; 32nd Floor, Yebisu Garden Place Tower, 20-3, Ebisu 4-chome, Shibuya-ku, Tokyo 150-6032 (JP).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

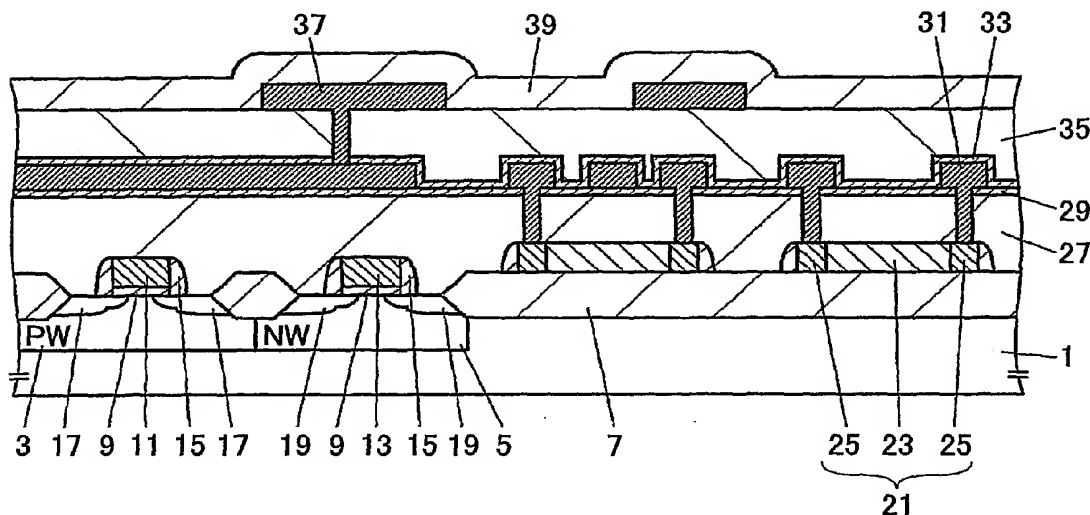
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SEMICONDUCTOR DEVICE AND FABRICATION PROCESS THEREOF



(57) Abstract: A semiconductor device includes a semiconductor substrate, a polysilicon pattern formed on the semiconductor substrate via an insulation film, an interlayer insulation film formed on the semiconductor substrate so as to cover the polysilicon pattern, and a metal interconnection layer pattern formed on the interlayer insulation film, wherein the metal interconnection layer pattern carrying silicon nitride films respectively on a top surface, a bottom surface and sidewall surfaces thereof.

WO 2006/036000 A1